

REMARKS

Applicants have considered the outstanding official action. It is respectfully submitted that the claims are patentable as set forth below.

The outstanding rejections are as follows:

- (1) Claims 28-29 and 33-40 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 1,945,136 (Cline); and
- (2) Claims 28-61 under 35 U.S.C. §103(a) over U.S. Patent No. 3,172,613 (Simons).

Initially, for clarity, applicants note that on page 2 of the official action, claims 28-61 are said to be rejected under §103 over Simons. However, in the first paragraph on page 3 of the official action in discussing the rejection, the Examiner refers to "Cline" with respect to rejecting claims 28-40 and 53-61. Thereafter, the Examiner refers to Simons by stating that "[w]ith respect to Claims 41-52, the method described in these claims would inherently result from the use of the unwinding device of Simons et al as advanced above." Based on applicants' reading of the Examiner's description of the applied reference at page 3, applicants understand that the reference to "Cline" on page

3 to be a typographical error and that the §103 rejection of claims 28-61 is based only on Simons and not on Cline in any way. Accordingly, applicants have addressed this §103 rejection of claims 28-61 as being based solely on Simons.

Claims 28, 41, 53 and 58 are the pending independent claims. Claim 28 claims an unwinding device for unwinding reels of web material comprising a rotating element with supports for at least two reels and a splicing member to join a first web material coming from an expiring reel to an initial free end of a second web material wound on a new reel. The at least one mechanical member is associated with each support of the supports to retain the initial free end of the new reel disposed on the support. The at least one mechanical member is torsionally connected to a respective support before the splicing member joins the first web material to the initial free end of the second web material. The at least one mechanical member is also torsionally released from the respective support after the splicing member joins the first web material to the initial free end of the second web material. Thereafter, the at least one mechanical member is in a neutral position which does not interfere with unwinding of the new reel. Support

for the amended language is present in the specification,
e.g. page 2, lines 12-22.

Claims 28-29 and 33-40 are rejected under 35 U.S.C. §102(b) as anticipated by Cline. Applicants respectfully submit that the Examiner has incorrectly construed Cline. Particularly, Cline discloses a web tension mechanism which cooperates with a reel to control the passage of a web from a roll into a press. The tension mechanism includes a pair of end plates 43,44 carried by a shaft 13 with opposed pairs of arms 45,46 on opposite ends of the shaft; drum shafts 47,48 extending transversely of the reel between the outer free ends of the arms 45,46, yoke supports 49,51 pivotally mounted at their inner ends on the shafts 47,48, respectively, and tension straps 52,53 for engaging the rolls 11,12, respectively. (See page 2, lines 45-57). Yoke support 49,51 and tension straps 52,53 are of similar construction and individualized to rolls 11 and 12, respectively, and are arranged to be drawn inward against the face of the roll to provide uniform tension against the face of the roll as it diminishes in size. (See page 2, lines 93-97.) The tension straps 52,53, are plural in number with respect to rolls 11,12, engage the face of the rolls 11, 12, are yieldingly connected at their outer ends

to the cross member 55 of the yokes 49,51 by means of coil springs 62,64, and are connected at their inner ends to take-up drums 63 on the drum shaft 48. The tension straps 52,53 pass from the take-up drums over idler drums 65 carried on the drum shaft 47, and over the face of the roll 12 to the connection points of the springs 64. Straps 52,53 are wound in opposite directions on drums 63 so that when shaft 48 is turned to draw straps 52 against roll 11, straps 53 are released from roll 12. In normal operating condition as shown in Figure 2, straps 52 are held against the face of roll 11 from which the web is being drawn and straps 53 are loose on roll 12. (See page 2, lines 114-130).

The Examiner incorrectly relies on the yoke support members 49,51 of Cline for corresponding to the at least one mechanical member as claimed by applicants. The yoke support members 49,51 do not retain an initial free end of a new reel as claimed by applicants, but rather keep the tension straps 52,53 under tension during unwinding of respective rolls 11,12. The tension straps 52,53 are arranged along the cylindrical surface of the roll in order to automatically draw tension against the face of the roll during unwinding paper from the roll to permit definite control of the tension applied to the roll as the web is

withdrawn therefrom (page 1, lines 64-68). Accordingly, the tension straps 52,53 engage the face of the roll and act as a braking means.

In applicants' claimed unwinding device of claim 28 (the only independent claim rejected over Cline), the at least one mechanical member is connected to a support of a reel and retains an initial free end of a new reel until splicing of the web occurs. The mechanical member is torsionally connected to the support before the splicing member joins the first web material to the initial free end of the second web material, and the mechanical member is torsionally released from the respective support after the splicing member joins the first web material to the initial free end of the second web material. Thereafter, the mechanical member is in a neutral position which does not interfere with unwinding of the new reel.

Accordingly, after the splicing member joins the first web material and the second web material and the mechanical member releases the initial free end of the second web material, the mechanical member does not co-act with the unwinding of the second web material since the mechanical member is in a neutral position. This is contrary to Cline where the tension straps remain in contact

with the corresponding rolls 11,12 by acting tangentially on the surface of a respective roll until the roll has been entirely unwound. The tension straps do not act in relation to a leading edge as claimed by applicants.

As such, Cline does not teach at least one mechanical member that is torsionally connected to a respective support before the splicing member joins the first web material to the initial free end of the second web material, and is torsionally released from the respective support after the splicing member joins the first web material to the initial free end of the second web material, thereafter the at least one mechanical member being in a neutral position which does not interfere with unwinding of the new reel as claimed. Accordingly, Cline does not teach each and every element of the claimed invention within the meaning of 35 U.S.C. §102. Withdrawal of the §102 rejection is respectfully requested.

Claims 28-61 are rejected under 35 U.S.C. §103(a) over Simons.

Claim 28 is described above. Claim 41 claims a method for continuously feeding a web material wound on a reel to a processing machine comprising feeding a first web material at a feed speed from a first reel and carrying in

rotation a second reel with a second web material. When the feed speed of the first web material is essentially same as a peripheral speed of the second reel, the first web material is joined to the second web material and the first web material is interrupted upstream of a splicing area between the first web material and the second web material. An initial free end of the second web material is held adherent to the second reel, until splicing of the first web material and the second web material, by at least one mechanical member which rotates with the second reel. The at least one mechanical member torsionally connecting with a support of the second reel until the first web material is joined to the second web material. Thereafter, the at least one mechanical member is torsionally disconnected from the support during splicing. The at least one mechanical member is carried to an idle position after the splicing.

Claim 53 claims an unwinding device for unwinding reels of web material comprising a rotating element with supports for at least two reels. The rotating element additionally carries at least two rollers. A splicing member joins a first web material coming from an expiring reel to an initial free end of a second web material wound on a new reel. At least one mechanical member is associated

with each support of the supports, to retain the initial free end of the new reel. The at least one mechanical member is torsionally connected to a respective support before the splicing member joins the first web material to the initial free end of the second web material. The at least one mechanical member is torsionally released from the respective support after the splicing member joins the first web material to the initial free end of the second web material. Thereafter, the at least one mechanical member is in a neutral position which does not interfere with unwinding of the new reel. The unwinding device also includes a ply-bonding unit, including ply-bonding wheels for joining plies of the first web material together stably before splicing to the second web material. The ply-bonding wheels cooperate alternatively with a respective one of the rollers.

Claim 58 claims an unwinding device for unwinding reels of web material comprising a rotating element with supports for at least two reels; a splicing member to join a first web material coming from an expiring reel to an initial free end of a second web material wound on a new reel; and at least one mechanical member associated with each of the supports, to retain the initial free end of the

new reel disposed on a respective one of the supports. Each mechanical member comprises an elastic element having a first end fixed to the respective one of the supports and a second end reversibly connectable to the respective one of the supports by a hooking member associated with the respective one of the supports. The hooking member cooperates with an actuator which controls the release of the elastic element when the initial free end of the second web material is to be joined to the first web material. The actuator disengages the second end of the elastic element when the splicing member joins the first web material to the initial free end of the second web material.

Simons discloses a method and apparatus for splicing a web of sheet material in roll form to a moving web. In relying on Simons, the Examiner equates the displacement member 18 of Simons to the mechanical member as claimed by applicants. In Simons, the displacement member is detachably mounted on the first roll immediately behind a free end portion 17 of the roll 7 and rests on the upper surface of the roll 7. At each of its ends, the displacement member 18 is attached to springs 20 thereby providing one at each end of the roll. The opposite end of each spring 20 is formed into an open hook 21 which loops

under and engages an end of the spindle 5. (See column 3, lines 34-47). When the roll 7 is rotated, the displacement member 18 is brought to impinge on a blade 13 and the displacement member 18 is not able to move any further. The continued rotation of the spindle 5 causes the hooks 21 to be disengaged so that the displacement member 18 is released and drops into a receiving basket 16, as shown in Figure 4. (See column 4, lines 21-28). Accordingly, the displacement member is entirely disengaged from the support after performing its function. Therefore, an operator of the device of Simons must remove the displacement member from the receiving basket 16 and attach the displacement member anew on the reel support for a new roll for the next cycle, contrary to applicants' claimed device.

In applicants' claimed device, the mechanical member remains attached to the reel support after disengagement with the leading edge of the web. In one embodiment, as shown for example in Figures 1-9, the mechanical member is torsionally engaged with the support 15 on which the web roll is supported. Once the tail end of the exhausted roll has been spliced to the leading end of the new roll, the mechanical member is released, in the sense that the torsional link between the mechanical member

and the support 15 is released and the mechanical member falls to a neutral position (in this embodiment, a lower position) and does not interfere with the roll as it rotates.

In another embodiment, as shown for example in Figures 10-13, the mechanical member is an elastic member, which has two ends. One end is stably fixed to the reel support and the other end has a hook 91 which can be released such that the elastic member is removed from the roll surface once the free leading edge has been spliced to the tail edge of an expiring reel. The elastic member continues to remain anchored to the reel support after releasing the leading edge of the web, contrary to the device of Simons.

The Examiner acknowledges that Simons only teaches one member for association with a roller and its leading edge but asserts that mere duplication would be obvious involving routine skill in the art. Applicants submit that the complete release of the displacement member is an inventive feature of Simons and, thus, even with mere duplication, the displacement member would still be released in its entirety and require reattachment to a new roll.

As such, Simons does not teach or suggest elements

of applicants' claimed inventions as follows:

(1) at least one mechanical member that is torsionally connected to a respective support before the splicing member joins the first web material to the initial free end of the second web material; and is torsionally released from the respective support after the splicing member joins the first web material to the initial free end of the second web material, thereafter the at least one mechanical member being in a neutral position which does not interfere with unwinding of the new reel, all the while being associated with the support (claims 28 and 53);

(2) at least one mechanical member torsionally connected to a support of the second reel until the joining of the first web material to the second web material; torsionally disconnecting the at least one mechanical member from the support during splicing; and carrying the at least one mechanical member to an idle position after the splicing (claim 41); and

(3) a mechanical member which comprises an elastic element having a first end fixed to the respective one of the supports and a second end reversibly connectable to the respective one of the supports by a hooking member associated with the respective one of the supports, the

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hooking member cooperating with an actuator which controls release of the elastic element when the initial free end of the second web material is to be joined to the first web material, wherein the actuator disengages the second end of the elastic element when the splicing member joins the first web material to the initial free end of the second web material (claim 58).

Accordingly, Simons does not render the claimed invention obvious within the meaning of 35 U.S.C. §103. Withdrawal of the §103 rejection is respectfully requested.

Reconsideration and allowance of the claims is respectfully urged.

Respectfully submitted,

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